CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.17/MK/BM/Bitumen/2014-15 03.05.2014

GRADATION DETERMINATION OF BITUMINOUS MACADAM MIX

As per IS2386 and IRC:SP:11-1984

Client	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
AGENCY	**Mr. M. Krishnamurthy,** Contractor, Bangalore.
NAME OF THE WORK	Providing and laying HDPE Water line in Ganesha Temple Block - II in J P Park, Ward No.17, BBMP, Bangalore.
REFERENCE	EE/RRND/Wo.No/223/2013-14 Dated: 05.02.2014
SAMPLE I/D	HDPE Water line in Ganesha Temple Block - II in J P Park, Ward No.17.
DATE OF TESTING	03.05.2014

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-04 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
26.5	0	0	0	100	100
19	35.15	7.28	7.28	92.72	90-100
13.2	84.36	17.48	24.77	75.23	56-88
4.75	258.3	53.53	78.30	21.70	16-36
2.36	62.32	12.92	91.22	8.78	4-19
0.3	26.31	5.45	96.67	3.33	2-10
0.075	4.15	0.86	97.53	2.47	0-8

Þ The results indicated above are based on the tests carried	Trail 2				Specified Limits as per MORTH specification table 500-04 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
26.5	0	0		100	100
19	30.22	6.28	6.28	93.72	90-100
13.2	85.21	17.70	23.97	76.03	56-88
4.75	260.5	54.10	78.07	21.93	16-36
2.36	52.62	10.93	89.00	11.00	4-19
0.3	22.32	4.64	93.64	6.36	2-10
0.075	7.18	1.49	95.13	4.87	0-8

Note:

Þ This test report should not be reproduced except in full, without written approval of the laboratory

Þ The results indicated above are based on the tests carried out on the samples received in the laboratory

Þ Any Query regarding the report must be reported within 30 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.

Tele Fax : 23223227, Website : www.civiltechconsultants.com

E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No: CTCE/BBMP/W.No.17/MK/BM/Agg.G/2014-15 03.05.2014

Aggregate Gradation Test

IS : 2386 Part I

Client	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
Agency	**Mr. M. Krishnamurthy,** Contractor, Bangalore.
Name of the work	Providing and laying HDPE Water line in Ganesha Temple Block - II in J P Park, Ward No.17, BBMP, Bangalore.
Reference	EE/RRND/Wo.No/223/2013-14 Dated: 05.02.2014
Sample ID	Hotmix Plant, Bangalore.
Type of Mix	Bituminous Macadam
Date of Testing	03.05.2014

Total Weight of Sample: **5200** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH specification
19	335	6.44	6.44	93.56	90-100	
13.2	1650	31.73	38.17	61.83	56-88	
4.75	1400	26.92	65.10	34.90	16-36	
2.36	990	19.04	84.13	15.87	4-19	
0.3	365	7.02	91.15	8.85	2-10	
0.075	140	2.69	93.85	6.15	0-8	

Total Weight of Sample: **5300** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH specification
19	225	4.25	4.25	95.75	90-100	
13.2	1750	33.02	37.26	62.74	56-88	
4.75	1450	27.36	64.62	35.38	16-36	
2.36	960	18.11	82.74	17.26	4-19	
0.3	440	8.30	91.04	8.96	2-10	
0.075	120	2.26	93.30	6.70	0-8	

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples received in the laboratory

→ Any Query regarding the report must be reported within 30 days from the date of testing

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.

Tele Fax : 23223227, Website : www.civiltechconsultants.com

E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com